

REMARKS

The Applicant has now had an opportunity to carefully consider the comments set forth in the Office Action mailed October 19, 2005. All of the rejections are respectfully traversed. Amendment, reexamination and reconsideration of the application in view of the following remarks are respectfully requested.

The Office Action

In the Office Action mailed October 19, 2005:

claims 2, 4, 5, 7, 8, 10-13, 18, 20 and 22-28 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,813,010 to Okamoto, et al. ("Okamoto") in view of U.S. Patent No. 6,002,798 to Palmer, et al. ("Palmer");

claim 6 was rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto in view of Palmer and further in view of U.S. Patent No. 5,276,616 to Kuga, et al. ("Kuga");

claims 15 and 16 were rejected under 35 U.S.C. §103(a) as being unpatentable Okamoto in view of Palmer and further in view of U.S. Patent No. 4,903,229 to Schmidt, et al. ("Schmidt");

claim 17 was rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto in view of Palmer and Schmidt and further in view of U.S. Patent No. 6,064,397 to Herregods, et al. ("Herregods"); and

claim 21 was rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto in view of Palmer and further in view of U.S. Patent No. 6,336,124 to Alam, et al. ("Alam").

The Claims are not Obvious

Claims 2, 4, 5, 7, 8, 10-13, 18, 20 and 22-28 were rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto in view of Palmer.

However, independent **claim 2** recites wherein determining a subsection delimiter comprises a user indicating at least one of a font size, a font style, a text string, a text location description, a predetermined machine readable symbol and a specific point coordinate within the document or wherein determining a subsection delimiter comprises using a predetermined machine readable symbol representing a demarcation point on a printed version of the document as the subsection delimiter.

It is respectfully submitted that the Office Action does not assert that Okamoto and Palmer disclose a user indicating at least one of a font size, a font style, a text string, a text location description, a predetermined machine readable symbol in a specific point coordinate with the document.

Additionally, it is respectfully submitted that the Office Action does not assert that Okamoto and Palmer disclose wherein determining a subsection delimiter comprises using a predetermined machine readable symbol representing a demarcation point on a printed version of the document as the subsection delimiter. It is noted that the Office Action asserts that Palmer teaches converting information of original documents into a bit-by-bit computer readable representation of the document. However, this is not an assertion that Palmer teaches determining a subsection delimiter comprises a predetermined machine readable symbol representing a demarcation point on a printed version of the document as a subsection delimiter.

For at least the foregoing reasons, **claim 2**, as well as **claims 4-6** and **21**, which depend therefrom, is not anticipated and is not obvious in light of Okamoto and Palmer taken alone or in any combination.

Additionally, **claim 2** recites searching the document to find occurrences of items corresponding to the defined subsection delimiter and generating the index for the document with found items corresponding to the subsection delimiter occurrences. In this regard, it appears that the Office considers the combination of segmentation codes and a sentence length to be analogous to the subsection delimiter recited in **claim 2**.

However, it is respectfully submitted that if this combination were analogous to the subsection delimiter recited in **claim 2**, then the logical architecture of Okamoto would contain entries for every occurrence of the segmentation code and sentence length combination. However, this is not the case. Instead, as pointed out by the Office Action, --when the segmented sentence is determined as having the possible of being a heading sentences according to the measure number of characters, or delimiter, the processor further determines whether the segmented sentence is a heading candidate, and then a heading word. After the segmented sentence is determined as a heading word, the heading goes through the decision to be assigned with a logical hierarchy, such as C1 in this case. The logical architecture containing the chapter heading is stored in the logical architecture

storage.--. Therefore, it is respectfully submitted that the combination of Okamoto and Palmer does disclose or suggest searching the document to find occurrences of items corresponding to the defined subsection delimiter and generating index for the document with found items corresponding to the subsection delimiter occurrences. Instead, the combination discloses subjecting found occurrences to a number of tests, discarding occurrences that fail the tests and generating a logical architecture based on a fraction of the occurrences. It is respectfully submitted that any method of a combination of Okamoto and Palmer is far more complicated than the novel method recited in **claim 2**.

For the foregoing additional reasons, **claim 2** is not anticipated and is not obvious in light of Okamoto and Palmer taken alone or in any combination.

Beginning at the bottom of page 3 and continuing through the first half of page 4, the Office Action makes certain assertions with regard to the disclosure of Palmer. However, the assertions are made without reference to any of the claims of the present application or to portions of the claims of the present application. Therefore, it is difficult to know which portions of Palmer, if any, the Office believes are analogous to elements recited in the claims or which elements recited in the claims the Office believes have analogs in Palmer. Clarification is respectfully requested.

In any event, it is respectfully submitted that any disclosure of the conventional block selection technique and rule-based knowledge system found in Palmer does not fairly disclose or suggest finding occurrences of items corresponding to a defined subsection delimiter wherein the subsection delimiter is determined by a user indicating at least one of a font size, a font style, a text string, a text location description, a predetermined machine readable symbol and a specific point coordinate within the document or wherein determining a subsection delimiter comprises using predetermined machine readable symbol representing a demarcation point on a printed version of the document as a subsection delimiter.

Additionally, it is respectfully submitted that disclosure of an operator selecting an index level, wherein the operator selects a level, such as level 1, and then the CPU subjects only title regions to OCR processing, does not disclose or suggest a user indicating at least one of a font size, a font style, a text string, a text location description, a predetermined machine readable symbol, and a specific point coordinate within the document, or using a predetermined machine readable symbol

representing a demarcation point on a printed version of a document as the subsection delimiter.

Furthermore, disclosure or displaying a document in Palmer does not disclose or suggest displaying an index.

Additionally, it respectfully submitted that there is no motivation in the art to make the suggested combination. The Office Action does not suggest a motivation for combining Okamoto and Palmer. It is respectfully submitted that the present application is the only source of motivation for combining Okamoto and Palmer. Therefore, the rejections of **claims 2, 4- 8, 10-13, 15-18 and 20-28** are based on impermissible hindsight.

For at least the foregoing additional reasons, **claim 2**, as well as **claims 3-6**, which depend therefrom, is not anticipated and is not obvious in light of Okamoto and Palmer taken alone or in any combination.

Arguments similar to those submitted in support of **claim 2** are submitted in support of **claim 10**. **Claim 10** recites a delimiter designator module operative to communicate with the document processor operator through the user interface in order to generate at least one delimiter designation for the delimiter definition.

The Office Action does not assert that Okamoto and Palmer disclose or suggest a delimiter designator module operative to communicate with the document processor operator through the user interface in order to generate at least one delimiter designation for the delimiter definition. It is respectfully submitted that disclosure of selecting an index level is not fairly construed to be disclosure of selecting a delimiter designation. For example, disclosure of selecting level 1 does not describe or disclose how to recognize titles. It is respectfully submitted that in Palmer the rule-based knowledge system includes some test for titles that cannot be adjusted by a user. One way in which the subject matter of the present application differs from the subject matter of Okamoto and Palmer is that users can describe, on a document-by-document or page-by-page basis, the characteristics of elements that are to be searched for.

For at least the foregoing reasons, **claim 10**, as well as **claims 11-13 and 15-17**, which depend therefrom, is not anticipated and is not obvious in light of Okamoto and Palmer taken alone or in any combination.

Additionally, **claim 10** recites a delimiter search operative to search for and record text and text location information regarding the occurrences corresponding to

the delimiter definition within the electronic version of the document. Arguments similar to those submitted in support of **claim 2** are submitted in support of **claim 10** with regard to the delimiter searcher. Since Okamoto does not include all the occurrences corresponding to the segmentation codes and the threshold sentence length in the logical architecture, and since Palmer does not disclose or suggest a delimiter at all, Okamoto and Palmer do not disclose or suggest the delimiter searcher recited in **claim 10**.

For at least the foregoing additional reasons, **claim 10**, as well as **claims 11-13** and **15-16**, which depend therefrom, is not anticipated and is not obvious in light of Okamoto and Palmer taken alone or in any combination.

Claim 18 recites defining the subsection delimiter includes at least one of a document processor operator building a subsection delimiter definition from a list of predetermined potential subsection delimiter components, a document processor operator entering a subsection delimiter through keyboard keystrokes, entering a subsection delimiter by selecting symbols on a displayed portion of the electronic version of the document and designating at least one demarcation point on at least one displayed portion of the electronic document to create a list of demarcation points to be used as a set of delimiter definitions.

Arguments similar to those submitted in support of **claims 2** and **10** are submitted in support of **claim 18**. Okamoto and Palmer do not disclose or suggest a document processor operator building a subsection delimiter definition from a list of predetermined potential subsection delimiter components or a document processor operator entering a subsection delimiter through keystrokes, entering a subsection delimiter by selecting symbols on a display portion of the electronic version of the document and designating at least one demarcation point on at least one displayed portion of the electronic document to create a list of demarcation points to be used as a set of delimiter definitions.

Okamoto does not disclose or suggest that the segmentation codes or sentence length are controlled or selected by a user, and the index level selection of Palmer does not disclose or suggest building a subsection delimiter definition from a list of predetermined potential subsection delimiter components or entering a subsection delimiter through keyboard keystrokes, by selecting symbols on a display portion of the electronic version of the document or designating at least one demarcation point on at least one display portion of the electronic document.

For at least the foregoing reasons, **claim 18** is not anticipated and is not obvious in light of Okamoto and Palmer taken alone or in any combination.

Claim 20 recites defining a subsection delimiter, wherein defining the subsection delimiter comprises marking a paper version of the document with at least one predetermined machine readable demarcation symbol prior to scanning the documents. It is respectfully submitted that the phrase --predetermined machine readable demarcation symbol-- was suggested by the Examiners and that the phrase is meant to refer to machine readable symbols that are not ordinarily readable by a human such as a bar graph or data glyph. In this regard, it is respectfully submitted that Okamoto and Palmer do not disclose or suggest defining a subsection delimiter, wherein defining the subsection delimiter comprises marking a paper version of the document with at least one predetermined machine readable demarcation symbol prior to scanning the document.

For at least the foregoing reasons, **claim 20** is not anticipated and is not obvious in light of Okamoto or Palmer taken alone or in any combination.

Claim 22 has been amended to recite determining a subsection delimiter definition including at least one delimiter characteristic, wherein determining the subsection delimiter comprises a user indicating at least one of a font size and a font style. It is respectfully submitted that Okamoto and Palmer do not disclose or suggest a user indicating at least one of a font size and a font style.

For at least the foregoing reasons, **claim 22** is not anticipated and is not obvious in light of Okamoto and Palmer taken alone or in any combination.

It is noted that with regard to **claims 22 and 23**, the Office Action does not assert that Okamoto and Palmer disclose a subsection delimiter comprises a user indicating at least one of a font size, a font style, a text location description, a predetermined machine readable symbol and a specific point coordinate within the document. However, in regard to **claims 11, 26 and 27**, the Office Action asserts that the segmentation codes of Okamoto are text location descriptions and a specific point coordinate within the document. It is respectfully submitted that while the symbols “. . .”, “;”, “,” or “:” may be fairly construed to be text strings, those symbols are not fairly construed to be a text location description or a specific point coordinate within a document.

It is assumed that the Office meant to apply this assertion to **claims 22 and 23** as well. However, it is respectfully submitted that the phrase --specific point

coordinate with the document-- was suggested by the Examiners. Description of text location information or specific point coordinate recordation can be found, for example, on page 6, line 19 - page 7, line 8, of the present application.

Furthermore, it is respectfully submitted that the phrase --specific point coordinate-- clearly indicates something other than a character, such as, for example, numerical coordinates indicating a position on a page and/or a page number. Similarly, a text location description is clearly not a reference to a character but to a location within a document. Nevertheless, the phrase --text location description-- was to be removed from **claim 22** and is not included in **claim 23**.

Claim 23 recites subject matter similar to that recited in **claim 22** except that a predetermined machine readable syntax and specific point coordinate are also recited. It is respectfully submitted that Okamoto and Palmer do not disclose or suggest these additional elements. Furthermore, Okamoto and Palmer do not disclose or suggest a user indicating at least one font size, font style, a predetermined machine readable symbol and a specific point coordinate within a document.

For at least the foregoing reasons, **claim 23** is not anticipated and is not obvious in light of Okamoto and Palmer taken alone or in any combination.

Claim 28 recites defining a subsection delimiter wherein defining the subsection delimiter comprises at least one of a user building a subsection delimiter from a list of predetermined potential subsection delimiter components, performing statistical analysis on recognized characters to select characteristics that are most likely to be associated with subsection delimiters, a user entering a subsection delimiter by selecting symbols on a displayed portion of an electronic version of the document, and designating at least one demarcation point on at least one displayed portion of the electronic document to create a list of demarcation points to be used as a set of delimiter definitions. It is respectfully submitted that Okamoto and Palmer do not disclose or suggest at least this portion of the subject matter recited in **claim 28**.

For at least the foregoing reasons, **claim 28** is not anticipated and is not obvious in light of Okamoto and Palmer taken alone or in any combination.

As indicated above, with regard to **claims 11, 26 and 27**, the Office Action asserts that the segmentation codes of Okamoto are text location descriptions and a specific point coordinate within the document. It is respectfully submitted that the

punctuation marks identified as segmentation codes are not fairly interpreted to be text location descriptions. It is respectfully submitted that while the punctuation marks may be fairly read as text strings, they are not fairly read as text location descriptions. Clearly, a location description identifies a point within a document without referring to text characters such as, for example, a page number and/or a location on a page such as, ten lines down or line number 23 or two inches from the bottom and one inch from the right. In this regard, the attention of the Examiner is directed to, for example, page 6, line 19 - page 7, line 8, of the present application. Additionally, the Examiner is reminded that the phrase --specific point coordinate within the document-- was suggested by the Examiners.

For at least the foregoing additional reasons, **claims 11, 26 and 27** are not anticipated and are not obvious in light of Okamoto and Palmer taken alone or in any combination.

Claims 4 and 5 depend from **claim 2**. **Claims 24 and 25** depend from **claim 22 and 23**, respectively. **Claims 4, 5, 24 and 25** are allowable for at least these reasons.

With regard to **claims 7 and 12**, the Office Action refers to Palmer and actions of the CPU including identifying a type of region and OCR processing in preparation for creating a retrieval index for a document and then simply asserts that the combination of Palmer and Okamoto result in a certain region within a document being selectable and applying an OCR process to it and further processing with Okamoto's indexing method. The Office Action goes on to assert the by identifying a certain region as a title region, the CPU is selecting an exemplary subsection title and performing an OCR.

However, this explanation of the rejection of **claim 7** overlooks differences between the elements recited in **claim 7** and relationships between the elements recited in **claim 7** which are not disclosed or suggested by the combination of Palmer and Okamoto. For example, **claim 7** recites selecting an exemplary subsection title. As indicated by the Office Action, the CPU of Palmer identifies all titles and does not disclose or suggest selecting an exemplary subsection title. Additionally, **claim 7** recites performing one of document recognition and optical character recognition on the selected exemplary subsection title. In this regard, it is respectfully submitted that Palmer performs the OCR process on all titles and not just a selected exemplary title.

Furthermore, **claim 7** recites using at least one recognized property of the exemplary subsection title as a subsection delimiter definition. Palmer does not disclose or suggest a subsection delimiter definition. Moreover, even if Palmer is construed to disclose a subsection delimiter definition, Palmer does not disclose or suggest determining the subsection delimiter definition by selecting an exemplary subsection title, performing optical recognition on that exemplary subsection title and using at least one recognized property of the exemplary subsection title as a subsection delimiter definition.

Claim 7 recites searching the document to find occurrences of items corresponding to the defined subsection delimiter. Palmer discloses identifying titles by some means. However, Palmer does not disclose or suggest identifying titles by first performing optical recognition on a selected exemplary title and looking for other occurrences of document portions that have a recognized property in common with the selected exemplary subsection title.

For at least the foregoing reasons, **claim 7**, as well as **claim 8**, which depends therefrom, is not anticipated and is not obvious in light of Okamoto and Palmer taken alone or in any combination.

Furthermore, **claim 7** has been amended to recite performing one of document recognition and optical character recognition on the selected exemplary sub-section title to determine at least one recognized property and using the at least one recognized property of the exemplary subsection title as a subsection delimiter definition. It is respectfully submitted that Palmer does not perform optical character recognition for the purpose of determining at least one recognized property to use as a subsection delimiter definition for searching the document to find other items corresponding to the subsection delimiter.

For at least the foregoing additional reasons, **claim 7**, as well as **claim 8**, which depends therefrom, is not anticipated and is not obvious in light of Okamoto and Palmer taken alone or in any combination.

Claim 12 has been amended (to correct an error) to recite: the document processor of **claim 10** wherein the delimiter designator is operative to display a plurality of document portions on the user interface for the document processor operator to view while determining the at least one delimiter designation. It is respectfully submitted that the Office Action does not even assert that Okamoto and Palmer disclose or suggest the subject matter recited in **claim 12**. Furthermore, it is

respectfully submitted that Okamoto does not disclose or suggest displaying document portions. Palmer discloses displaying retrieved documents (after a search)(FIG. 7, steps 703, 704; column 8, line15 - column 9, line 41), but not for consideration while determining a subsection delimiter.

For at least the foregoing reasons, it is respectfully submitted that **claim 12**, as well as **claim 13**, which depends therefrom, is not anticipated and is not obvious in light of Okamoto and Palmer taken alone or in any combination.

Claim 8 recites the method operative to automatically generate an index for a document of **claim 7** wherein selecting an exemplary subsection title comprises displaying a plurality of document pages on a user interface, selecting at least one demarcation point on at least one of the plurality of pages and using the at least one demarcation point as the defined subsection delimiter.

In explaining the rejection of **claim 8**, the Office Action simply asserts that Palmer teaches that an input is made by the user to input a selection regarding the index and that Okamoto discloses that a demarcation point is defined as a subsection delimiter. However, the Office Action does not assert that Okamoto and Palmer disclose or suggest displaying a plurality of document pages on a user interface. The Office Action does not assert that Okamoto and Palmer disclose or suggest selecting at least one demarcation point on at least one of the plurality of pages. The Office Action does not assert that Okamoto and Palmer disclose or suggest using the at least one demarcation point as the defined subsection delimiter. It is respectfully submitted that Okamoto and Palmer do not disclose or suggest any of the elements recited in **claim 8**.

For at least the foregoing reasons, it is respectfully submitted that **claim 8** is not anticipated and is not obvious in light of Okamoto and Palmer taken alone or in any combination.

In explaining the rejection of **claim 13**, the Office Action provides the same reasoning as applied to **claim 8** above. However, **claim 13** recites the document processor of **claim 12**, wherein the user interface is operative to receive demarcation point designations from the document processor operator and deliver the demarcation point designations from the delimiter designator as delimiter designations. It is respectfully submitted that disclosure of a selection regarding the index does not disclose or suggest a user interface operative to receive demarcation

point designations from a document processor operator. Therefore, Palmer and Okamoto do not disclose or suggest the subject matter of **claim 13**.

For at least the foregoing reasons, **claim 13** is not anticipated and is not obvious in light of Okamoto and Palmer taken alone or in any combination.

Claim 6 was rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto in view of Palmer and further in view of Kuga. However, **claim 6** depends from **claim 2** and is not anticipated and is not obvious for at least that reason.

Claims 15 and 16 were rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto in view of Palmer and further in view of Schmidt. **Claim 17** was rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto in view of Palmer and Schmidt further in view of Herregods. However, **claim 15** depends from **claim 10**. **Claim 16 and 17** depend from **claim 15**. Therefore, **claims 15, 16 and 17** depend from **claim 10** and are not anticipated and are not obvious in view of Okamoto, Palmer, Schmidt and Herregods taken alone or in any combination, for at least that reason.

Claim 21 was rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto in view of Palmer and further in view of Alam. However, **claim 21** depends from **claim 2** and is not anticipated and is not obvious in light of Okamoto, Palmer and Alam taken alone or in any combination, for at least that reason.

Telephone Interview

In the interests of advancing this application to issue the Applicant respectfully requests that the Examiner telephone the undersigned to discuss the foregoing or any suggestions that the Examiner may have to place the case in condition for allowance.

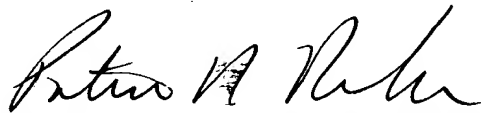
CONCLUSION

Claims 2, 4-8, 10-13, 15-18 and 20-28 remain in the application. **Claims 7, 12, 22 and 26** have been amended. For at least the reasons cited above, the application is now in condition for allowance. Accordingly, an early indication thereof is respectfully requested.

Respectfully submitted,

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11/16/05
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